

Date: Thursday, 10/19/2006 9:33:21 AM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : FWD X-TUBE EXTENDED HEIGHT GEAR (-011)
Job Number : 29064	
Estimate Number : 10007	
P.O. Number : N/A	Part Number : D205596101
This Issue : 10/19/2006 S.O. No. : N/A	Drawing Number : D205-596-101 REV A
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A Type : LANDING GEAR	Drawing Revision : A
Previous Run : 29063	Material : N/A
Written By : _____	Due Date : 11/15/2006 Qty: 1 Um: Each
Checked & Approved By : <i>[Signature]</i> 06 10 19	
Comment : Est Rev G Removed Bending 05-10-25 JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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**Comment:** DOCUMENT CONTROL

Photocopy D205-594 bluefile & type labels per PPP D205-596-101 CHG001

KS 06 10 23 ①

2.0	D2889	FWD Crosstube
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**Comment:** Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

FWD Crosstube

Pick:

Qty Part number Description Batch

1 D2889 Fwd Crosstube

25675 B31350

3.0	BENDING	BENDING MACHINE
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**Comment:** BENDING MACHINE

Bend as per Dwg D2889

EL 7-3-21

4.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
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**Comment:** LANDING GEAR RESOURCE 1

Mark 31.53" for cutting from tangential line in the straight section from D2889 as per Dwg wall template.

DD 7-3-26

5.0	QC6	DIMENSIONAL CHECK
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**Comment:** DIMENSIONAL CHECK

Conformity check and sign off by engineering.

11/07/03/26 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 10/19/2006 9:33:21 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)

Job Number: 29064

Part Number: D205596101

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-101

DP/EL 1-3-26

JN 7-3-26

2-Deburr & Inspect for surface damage. Polish cut surface. Scribe part # and end of tube.

Batch # on one

29064

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat per QSI 005 4.1

JN 7-3-26

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/03/26 ①

9.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Prime inside and outside with Immron per QSI 005 4.2

07/03/26

①

10.0

QC14

Inspect Spray Paint



Comment: Inspect Spray Paint

07/03/27 ①

11.0

D2856600

Abrasion Strip



Comment: Qty.: 0.7090 f(s)/Unit Total: 0.7090 f(s)

Abrasion Strip

Pick:

Qty Part number Description Batch

2 D2856-600-851 Abrasion Strip

B26650

07-03-27

12.0

D28931

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Support

Pick:

Qty Part number Description Batch

2 D2893-1 Support

7475

07-03-27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: LD Date: 07/03/20
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 10/19/2006 9:33:21 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD X-TUBE EXTENDED HEIGHT GEAR (-011)

Job Number: 29064

Part Number: D205596101

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

MS2192024

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part number

Description Batch

4 MS21920-24

Clamp

102932

27 07-03-27

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install Abrasion strips per QSI 035 position using DT8582. Install supports and clamps per Dwg

D205-596-101. Torque clamps to 80-100 in lb. Seal edges of support using Sikaflex

27 07-03-27

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

DP 7-3-27

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-101

Location:

KEU-E

07/03/28 (1)

07/03/28 (1)

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/03/28 (1)

Job Completion



W 07/03/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

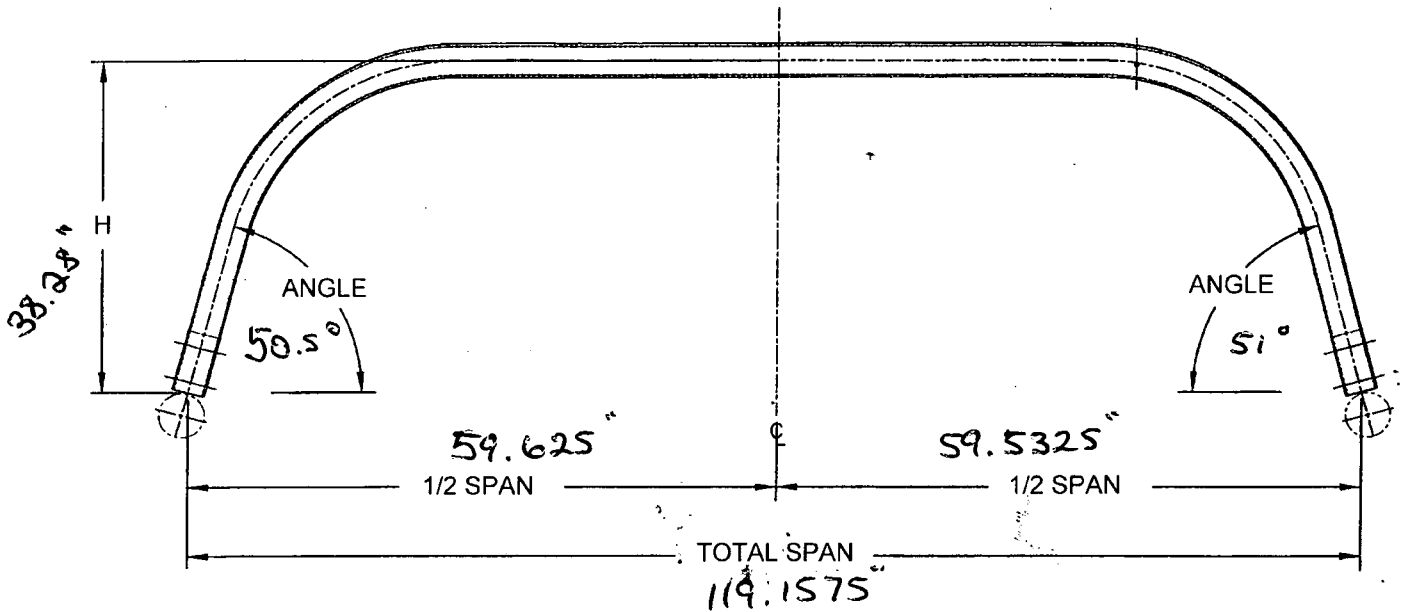
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Crosstube Bend Dimension Sheet



PART NUMBER: D205-596-

BATCH NUMBER: 29064

DRAWING: D205-596-101 REVISION: A

H: 38.3

1/2 SPAN: 59.6

TOTAL SPAN: ~~119.2~~ 119.2

ANGLE: 50°

QC 15: WA

DATE: 07/03/26

QTY: ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

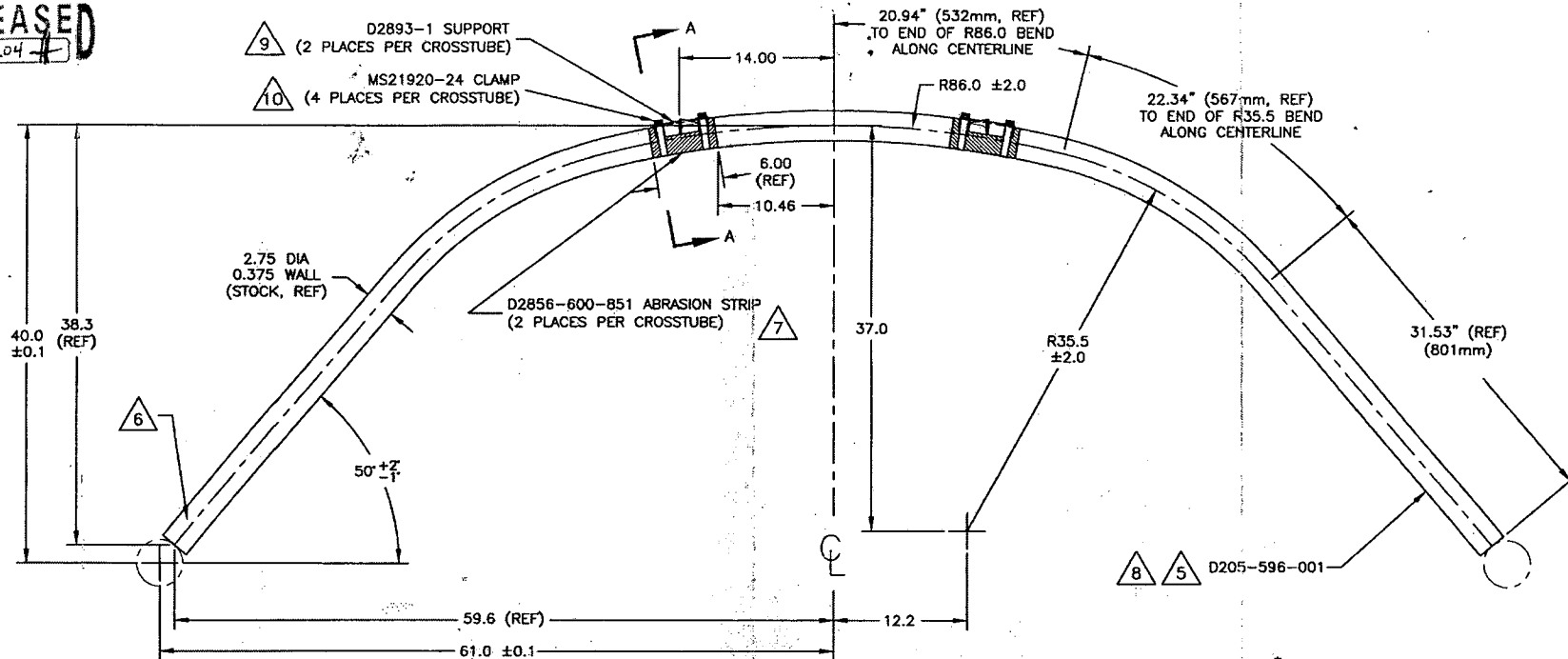
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

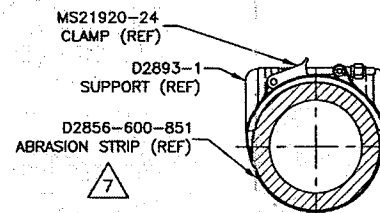
NOTE: Date & initial all entries

RELEASED
02.06.04



GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) MATERIAL: MANUFACTURE FROM D6005-180
FINISHED LENGTH = 149.60
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 6) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS
- 7) INSTALL D2856-600-851 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2893-1 SUPPORT, PER QSI 035
- 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005\"
- 9) SEAL EDGES OF SUPPORTS USING SIKAFLEX-241/-291 SEALANT (OPTIONAL)
- 10) TORQUE CLAMPS 80 TO 100 IN-LB



SECTION A-A
SCALE 2:5

A		02.05.27	NEW ISSUE
DESIGN	✓	DRAWN BY	CP
CHECKED	✓	APPROVED	✓
DATE	02.05.27	DRAWING NO.	D205-596-101
		TITLE	XTUBE ASS'Y (HI-HI FWD)
COPYRIGHT © 2002 BY DART AEROSPACE LTD.		DART AEROSPACE LTD.	REVISION A
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			SHEET 1 OF 1
			SCALE 1:10

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CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER NO. 210621

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

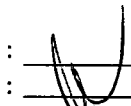

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 3/20/2007 10:35:03 AM
 User: Chantal Lavoie

Process Sheet

Customer :	CU-DAR001 Dart Helicopters Services	Drawing Name :	FWD X-TUBE
Job Number :	31350		
Estimate Number :	10006		
P.O. Number :		Part Number :	D2889
This Issue :	3/20/2007	S.O. No. :	
Prsht Rev. :	NC	Drawing Number :	D2889 REV B
First Issue :	1/1	Project Number :	N/A
Previous Run :	29487	Drawing Revision :	B
Written By :		Material :	
Checked & Approved By :		Due Date :	3/27/2007
Comment :	Est Rev A	Qty:	1
	New Issue 05-10-25 JLM	Um:	Each

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6005180	Crosstube material
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Crosstube material

Pick:

Qty	Part number	Description	Batch
1	D2889	Fwd Crosstube	25673

EL 7-3-21

2.0	BENDING	BENDING MACHINE
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**Comment:** LANDING GEAR RESOURCE 1

1-Bend D2889 as per Dwg D2889 and Folio FT001

EL 7-3-21

3.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
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**Comment:** LANDING GEAR RESOURCE 1

1-Deburr and Polish

N/A

see w/o 29064

4.0	QC6	DIMENSIONAL CHECK
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**Comment:** DIMENSIONAL CHECK

2007/03/26 ©

5.0	HAND FINISHING1	HAND FINISHING RESOURCE #1
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**Comment:** HAND FINISHING RESOURCE #1

Acid etch and alodine as per QSI 005 4.1

Inside and outside of tube

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: LD Date: 07/03/28
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Tuesday, 3/20/2007 10:35:03 AM
User: Chantal Lavoie

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: FWD X-TUBE

Job Number: 31350

Part Number: D2889

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

N/A

7.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

N/A

8.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

①

207103128

Job Completion



W. 07-03-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

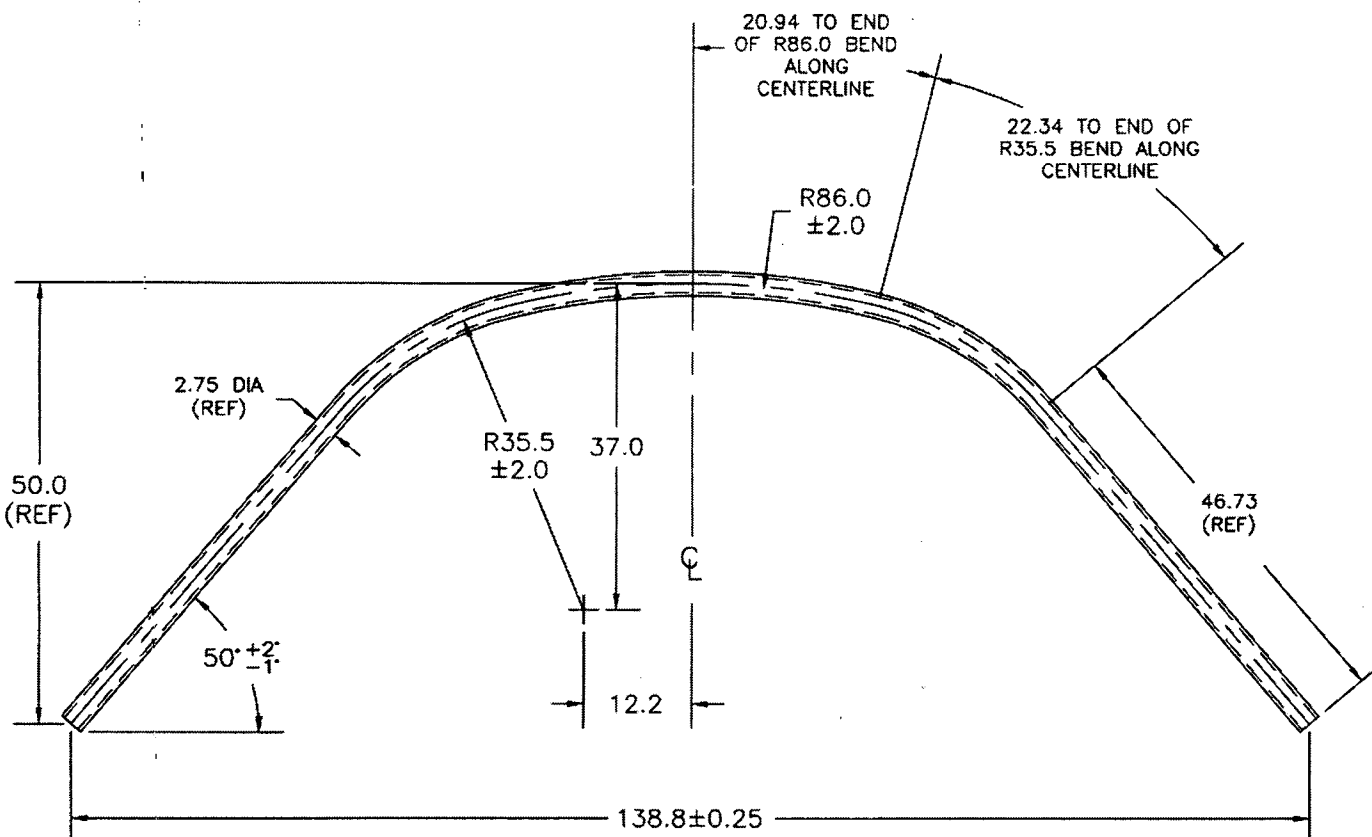
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DARTRELEASED
02.10.28

DESIGN		DRAWN BY		DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA		REV. B			
CHECKED	APPROVED	DRAWING NO.	D2889	SHEET 1 OF 1	
DATE	02.10.18	TITLE	FWD CROSS TUBE	SCALE	1:20
A	99.05.21	NEW ISSUE			
B	02.10.18	ADD TANGENT LENGTHS; CHANGE NOTES			

**NOTES**

- 1) MATERIAL: MANUFACTURE FROM D6005-180 (Ø2.75 OD x 0.375 WALL)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) PART IS SYMMETRIC ABOUT CENTERLINE
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) BEND PROGRESSIVELY WITH MINIMUM OF 3 PASSES
- 6) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

